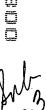
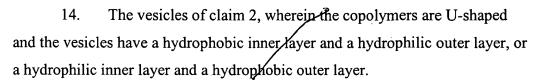
Úī



## What is claimed is:

- 1. Vesicles comprising membranes formed from amphiphilic copolymers having hydrophobic and hydrophilic segments.
- The vesicles of claim 1, wherein the copolymers are ABA 2. copolymers, wherein one of A and Bay hydrophobic and the other is hydrophilic.
  - Nanocapsules formed by stabilization of the vesicles of claim 1.  $\oplus \mathfrak{B}.$
- The nanocapsules of claim 3, wherein the copolymers are stabilized by end group polymerization.
- 5. The nanocapsules of claim #, wherein the nanocapsules are stabilized via crosslinking.
- The vesicles of claim 1, wherein the copolymers are AB 6. copolymers, wherein one of A and B is hydrophobic and the other is hydrophilic.
  - 7. Nanocapsules formed by stabilization of the vesicles of claim 6.
- The nanocapsules of claim of wherein the copolymers are 8. stabilized by end group polymerization.
- The nanocapsules of claim 8, wherein the nanocapsules are 9. stabilized via crosslinking.
- 10. The vesicles of claim 1, wherein an active agent is encapsulated within the vesicle.
- 11. The nanocapsules of claim 3, wherein an active agent is encapsulated within the vesicle.
- 12. The vesicles of claim 2, wherein the vesicles comprise a hydrophilic inner layer, a hydrophobic middle layer and a hydrophilic outer layer.
- 13. The vesicles of claim 2/wherein the vesicles comprise a hydrophobic inner layer, a hydrophilic middle layer and a hydrophobic outer layer.





- 15. The vesicles of claim 5, wherein the vesicles have a hydrophobic inner layer and a hydrophilic outer layer, or a hydrophilic inner layer and a hydrophobic outer layer.
- 16. The nanocapsules of claim 4, wherein the polymerization is via photopolymerization.
- 17. The vesicles of claim 1, wherein a molecule is incorporated into the vesicle membrane.
- 18. The nanocapsules of claim 3, wherein the hollow morphology of the nanocapsules is preserved when the nanocapsules are dry.
  - 19. The vesicles of claim 1, wherein the vesicles are biodegradable.
- 20. The nanocapsules of claim 3, wherein the nanocapsules are biodegradable.
  - 21. A method of making a nancapsule, comprising: forming a vesicle from an amphiphilic copolymer; and stabilizing the copolymer.
- 22. The method of claim 21, wherein the vesicles are stabilized by end group polymerizing the copolymers.
- 23. The method of claim 21/wherein the vesicles are stabilized by crosslinking the copolymers to each other.
- 24. The method of claim/1, wherein the amphiphilic copolymers comprise an ABA copolymer, where one of A is hydrophilic and the other is hydrophobic.
- 25. The method of claim 21, wherein the copolymers comprise polymerizable end groups and the vesicles are stabilized by polymerizing the end groups.
- 26. The method of claim 25, wherein the step of stabilization further comprises crosslinking the copolymers internally.



- The vesicles of claim 1 further comprising targeting molecules 27. bound to the surface of the vesicles.
- 28. The vesicles of claim 27 wherein the targeting molecules are selected from the group consisting of carbohydrates, proteins, folic acid, peptides, peptoids, and antibodies.